California Board of Registered Nursing

2011-2012 Annual School Report

Data Summary and Historical Trend Analysis

A Presentation of Pre-Licensure Nursing Education Programs in California

Greater Sacramento

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INTRODUCTION

Each year, the California Board of Registered Nursing (BRN) requires all pre-licensure registered nursing programs in California to complete a survey detailing statistics of their programs, students and faculty. The survey collects data from August 1 through July 31. Information gathered from these surveys is compiled into a database and used to analyze trends in nursing education.

The BRN commissioned the University of California, San Francisco (UCSF) to conduct a historical analysis of data collected from the 2001-2002 through the 2011-2012 survey. In this report, we present ten years of historical data from the BRN Annual School Survey. Data analyses were conducted statewide and for nine economic regions¹ in California, with a separate report for each region. All reports are available on the BRN website (http://www.rn.ca.gov/).

This report presents data from the 6-county Greater Sacramento region. Counties in the region include El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. All data are presented in aggregate form and describe overall trends in the areas and over the times specified and, therefore, may not be applicable to individual nursing education programs. Additional data from the past ten years of the BRN Annual School Survey are available in an interactive database on the BRN website.

Beginning with the 2011-2012 Annual School Survey, certain questions were revised to allow schools to report data separately for satellite campuses located in regions different from their home campus. This change was made to more accurately report student and faculty data by region, but it has the result that data which were previously reported in one region are now being reported in a different region. This is important because changes in regional totals that appear to signal either an increase or a decrease may in fact be the result of a program reporting satellite campus data in a different region. Data tables impacted by this change will be footnoted. In these instances, comparing 2011-2012 data to the previous year is not recommended. When regional totals include satellite campus data from a program whose home campus is located in a different region, it will be listed in Appendix A.

¹ The nine regions include: (1) Northern California, (2) Northern Sacramento Valley, (3) Greater Sacramento, (4) Bay Area, (5) San Joaquin Valley, (7) Central Coast, (8) Los Angeles Area (Los Angeles and Ventura counties), (9) Inland Empire (Orange, Riverside, and San Bernardino counties), and (10) Southern Border Region. Counties within each region are detailed in the corresponding regional report. The Central Sierra (Region 6) does not have any nursing education programs and was, therefore, not included in the analyses.

DATA SUMMARY AND HISTORICAL TREND ANALYSIS²

This analysis presents pre-licensure program data from the 2011-2012 BRN School Survey in comparison with data from previous years of the survey. Data items addressed include the number of nursing programs, enrollments, completions, retention rates, new graduate employment, student and faculty census data, the use of clinical simulation, availability of clinical space, and student clinical practice restrictions.

Trends in Pre-Licensure Nursing Programs

Number of Nursing Programs

In 2011-2012, Greater Sacramento had a total of seven pre-licensure nursing programs; six ADN programs and one BSN program. This represents the addition of one ADN program over the previous year. Nearly three-quarters (71.4%) of prelicense nursing programs in the region are public, however, private programs have accounted for all new program growth in the past decade.

Number of Nursing Programs

Trainber of training i re	Ť	Academic Year									
	2002- 2003	2003- 2004	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012	
Total Nursing Programs	5	5	5	7	7	7	6	6	6	7	
ADN	4	4	4	5	5	5	5	5	5	6	
BSN	1	1	1	1	1	1	1	1	1	1	
ELM	0	0	0	1	1	1	0	0	0	0	
Public	5	5	5	6	6	6	5	5	5	5	
Private	0	0	0	1	1	1	1	1	1	2	
Total Number of Schools	5	5	5	6	6	6	6	6	6	7	

For 2011-2012, two pre-license programs (28.6%) in the region reported partnering with another school to offer a program leading to a higher nursing degree.

	Academic Year								
Partnerships*	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012		
Schools that partner with another program that leads to a higher degree	14.3%	14.3%	16.7%	16.7%	66.7%	0%	0%		
Total number of programs	7	7	6	6	6	6	7		

^{*}These data were collected for the first time in 2005-2006.

² 2011-2012 data may be influenced by satellite campus data being reported and allocated to their proper region for the first time in the 2011-2012 survey. Tables affected by this change are noted, and we caution the reader against comparing data collected in 2011-2012 with data collected in previous year's surveys.

Admission Spaces and New Student Enrollments

Pre-license nursing programs in the Greater Sacramento region reported a total 653 spaces available for new students in 2011-2012. These spaces were filled with a total of 677 students, which represents the eighth consecutive year pre-license nursing programs in the region enrolled more students than were spaces available. 57.1% (n=4) of programs reported that they overenrolled students and the most frequently reported reason for doing so was to account for attrition.

Availability and Utilization of Admission Spaces[†]

·	Academic Year									
	2002- 2003	2003- 2004	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012
Spaces Available	340	490	561	636	561	669	530	542	506	653
New Student Enrollments	340	486	563	663	624	722	552	565	515	677
% Spaces Filled	100.0%	99.2%	100.4%	104.2%	111.2%	107.9%	104.2%	104.2%	101.8%	103.7%

[†]2011-2012 data may be influenced by the allocation of satellite campus data from another region

Greater Sacramento nursing programs continue to receive more applications requesting entrance into their programs than can be accommodated. In 2011-2012, programs received 4,741 qualified applications for just 653 available spaces; 85.7% of qualified applications were not accepted for admission.

Student Admission Applications*†

	Academic Year									
	2002- 2003	2003- 2004	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012
Qualified Applications	866	886	1,859	2,421	2,391	4,032	4,275	5,213	4,438	4,741
Accepted	340	486	563	663	624	722	552	565	515	677
Not Accepted	526	400	1,296	1,758	1,767	3,310	3,723	4,648	3,923	4,064
% Qualified Applications Not Accepted	60.7%	45.1%	69.7%	72.6%	73.9%	82.1%	87.1%	89.2%	88.4%	85.7%

^{*}These data represent applications, not individuals. A change in the number of applications may not represent an equivalent change in the number of individuals applying to nursing school.

[†]2011-2012 data may be influenced by the allocation of satellite campus data from another region

Pre-license nursing programs in the Greater Sacramento region enrolled 677 new students in 2011-2012. The distribution of new enrollments by program type was 58.9% ADN (n=399), 34.6% BSN (n=234), and 6.5% ELM (n=44). New student enrollment in the region's public programs accounted for approximately three-quarters (76.4%) of total new student enrollment in the region in 2011-2012.

New Student Enrollment by Program Type[†]

	Academic Year									
	2002- 2003	2003- 2004	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012
New Student Enrollment	340	486	563	663	624	722	552	565	515	677
ADN	220	359	392	461	440	561	451	405	355	399
BSN	120	127	171	138	184	161	101	160	160	234
ELM				64	0	0				44
Private				11	28	54	72	64	31	160
Public	340	486	563	652	596	668	480	501	484	517

[†]2011-2012 data may be influenced by the allocation of satellite campus data from another region

Student Census Data

A total of 1,126 students were enrolled in a Greater Sacramento pre-license nursing program as of October 15, 2012. The 2012 census of the region's programs indicates that 49.1% (n=553) of students were enrolled in ADN programs, 41.7% (n=469) in BSN programs, and 9.2% (n=104) in ELM programs.

Student Census Data*†

	Year									
Program Type	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
ADN	519	637	393	731	705	722	740	665	530	553
BSN	318	352	351	353	401	357	286	285	312	469
ELM				60	60	0				104
Total Nursing Students	837	989	744	1,144	1,166	1,079	1,026	950	842	1,126

^{*}Census data represent the number of students on October 15th of the given year

[†]2012 data may be influenced by the allocation of satellite campus data from another region

Student Completions

Program completions at Greater Sacramento pre-license nursing programs totaled 556 in 2011-2012. The distribution of completions by program type was 49.1% ADN (n=273), 44.3% BSN (n=246), and 6.6% ELM (n=37).

Student Completions[†]

	Academic Year									
	2002- 2003	2003- 2004	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012
Student Completions	267	302	403	419	444	634	575	551	483	556
ADN	173	189	294	304	332	347	406	402	356	273
BSN	94	113	109	115	112	233	169	149	127	246
ELM				0	0	54				37

[†]2011-2012 data may be influenced by the allocation of satellite campus data from another region

Retention and Attrition Rates

Of the 435 students scheduled to complete a Greater Sacramento nursing program in the 2011-2012 academic year, 82.8% (n=360) completed the program on-time, 6.2% (n=27) are still enrolled in the program, and 11.0% (n=48) dropped out or were disqualified from the program.

Student Retention and Attrition[†]

		Academic Year								
	2002- 2003	2003- 2004	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012
Students Scheduled to Complete the Program	315	381	493	473	519	584	532	546	496	435
Completed On Time	258	298	382	350	353	442	432	367	393	360
Still Enrolled	25	43	23	31	49	22	39	87	16	27
Attrition	32	40	88	92	117	120	61	92	87	48
Completed Late [‡]								32	25	33
Retention Rate*	81.9%	78.2%	77.5%	74.0%	68.0%	75.7%	81.2%	67.2%	79.2%	82.8%
Attrition Rate**	10.2%	10.5%	17.8%	19.5%	22.5%	20.5%	11.5%	16.9%	17.5%	11.0%
% Still Enrolled	7.9%	11.3%	4.7%	6.5%	9.5%	3.8%	7.3%	15.9%	3.2%	6.2%

[†]2011-2012 data may be influenced by the allocation of satellite campus data from another region

[‡]Data were collected for the first time in the 2009-2010 survey. These completions are not included in the calculation of either the retention or attrition rates.

^{*}Retention rate = (students completing program on-time)/(students scheduled to complete)

^{**}Attrition rate = (students dropped or disqualified who were scheduled to complete)/(students scheduled to complete)

Note: Blank cells indicate the information was not requested in the given year.

Retention and Attrition Rates for Accelerated Programs

The 2011-2012 average retention rate for accelerated programs in the Greater Sacramento region was 89.9%, which is much higher by comparison with traditional programs. Similarly, the average attrition rate was 3.4%, which is considerably lower than the average rate for traditional programs.

Student Retention and Attrition for Accelerated Programs*[†]

	Academic Year								
	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012				
Students Scheduled to Complete the Program	111	150	54	207	89				
Completed On Time	78	120	44	190	80				
Still Enrolled	3	0	7	3	6				
Attrition	30	30	3	14	3				
Completed Late [‡]			1	3	7				
Retention Rate**	70.3%	80.0%	81.5%	91.8%	89.9%				
Attrition Rate***	27.0%	20.0%	5.6%	6.8%	3.4%				
% Still Enrolled	2.7%	0%	7.4%	1.4%	6.7%				

^{*}Retention and attrition data for accelerated programs were collected for the first time in 2007-2008.

Employment of Recent Nursing Program Graduates³

Hospitals represent the most frequently reported employment setting for recent graduates of prelicense programs in the Greater Sacramento region. In 2011-2012, the region's programs reported that 50.9% of employed recent graduates were working in a hospital setting. Programs also reported that slightly more than one-quarter of recent graduates (26.7%) had not found employment in nursing at the time of the survey. The 2011-2012 average regional share of new graduates employed in nursing in California was 57.5%.

Employment of Recent Nursing Program Graduates[†]

	Academic Year							
Employment Location	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012
Hospital	79.2%	49.2%	71.4%	73.4%	52.8%	53.0%	50.6%	50.9%
Long-term care facilities	0.5%	0%	5.7%	16.4%	14.5%	13.3%	10.7%	4.2%
Community/public health facilities	0.0%	0%	0.7%	4.2%	6.7%	3.3%	3.3%	3.0%
Other healthcare facilities	0.5%	0.8%	2.8%	4.0%	2.8%	7.8%	5.0%	2.8%
Other	18.9%	50.0%	12.7%	2.0%	0%	11.7%	2.0%	12.4%
Unable to find employment*						27.8%	29.3%	26.7%
In California	64.8%	48.7%	97.4%	92.8%	57.0%	88.8%	72.5%	57.5%

[†]2011-2012 data may be influenced by the allocation of satellite campus data from another region

Note: Blank cells indicate the information was not requested in the given year

[†]2011-2012 data may be influenced by the allocation of satellite campus data from another region.

[‡]Data were collected for the first time in 2009-2010 survey. These completions are not included in the calculation of either the retention or attrition rates.

^{**}Retention rate = (students completing program on-time)/(students scheduled to complete)

^{***}Attrition rate = (students dropped or disqualified who were scheduled to complete)/(students scheduled to complete) Note: Blank cells indicated that the applicable information was not requested in the given year.

^{*}Data were added to the survey in 2009-2010

³ Graduates whose employment setting was reported as "unknown" have been excluded from this table. In 2011-2012, on average, the employment setting was unknown for 19% of recent graduates.

Clinical Simulation in Nursing Education

Between 8/1/11 and 7/31/12, 6 Greater Sacramento nursing schools reported using clinical simulation⁴. The remaining school began using clinical simulation during the 2012-2013 academic The most frequently reported reasons for why schools in the region used a clinical simulation center in 2011-2012 were to provide clinical experience not available in a clinical setting and to make up for clinical experiences. Of the six schools that used clinical simulation centers in 2011-2012, 83.3% (n=5) plan to expand the center.

Reasons for Using a Clinical Simulation Center*	2007-08	2008-09	2009-10	2010-11	2011-12
To provide clinical experience not available in a clinical setting	75.0%	100%	100%	100%	100%
To make up for clinical experiences	100%	66.7%	83.3%	83.3%	100%
To check clinical competencies	75.0%	100%	83.3%	66.7%	83.3%
To standardize clinical experiences	75.0%	66.7%	100%	66.7%	66.7%
To increase capacity in your nursing program	25.0%	33.3%	16.7%	16.7%	16.7%
Number of schools that use a clinical simulation center	4	6	6	6	6

^{*}These data were collected for the first time in 2006-2007. However, changes in these questions for the 2007-2008 administration of the survey and lack of confidence in the reliability of the 2006-2007 data prevent comparability of the data. Therefore, data prior to 2007-2008 are not shown.

Clinical Space & Clinical Practice Restrictions5

Only one prelicense nursing program in the Greater Sacramento region reported being denied access to a clinical placement, unit or shift in 2011-2012, compared to four programs one year ago. The program reported that it was offered alternatives by the site for the lost clinical unit and clinical shift but was not offered an alternative for the lost clinical placement. The lack of access to clinical space resulted in the loss of one clinical placement, two units, and two shifts, which affected 30 students.

Denied Clinical Space	2010-11	2011-12
Programs Denied Clinical Placement	4	1
Programs Offered Alternative by Site	0	0
Placements Lost	4	1
Number of programs that reported	6	7
Programs Denied Clinical Unit	2	1
Programs Offered Alternative by Site	2	1
Units Lost	1	2
Number of programs that reported	6	7
Programs Denied Clinical Shift	1	1
Programs Offered Alternative by Site	1	1
Shifts Lost	0	2
Number of programs that reported	6	7
Total number of students affected	90	30

administration of the survey prevent comparability of the data. Therefore, data prior to 2010-2011 are not shown.

⁴ Clinical simulation provides a simulated real-time nursing care experience using clinical scenarios and low to hi-fidelity mannequins, which allow students to integrate, apply, and refine specific skills and abilities that are based on theoretical concepts and scientific knowledge. It may include videotaping, de-briefing and dialogue as part of the learning process.

⁵ Some of these data were collected for the first time in 2009-2010. However, changes in these questions for the 2010-2011

Multiple reasons were given by the one nursing program as to why the program reported being denied clinical space.

Reasons for Clinical Space Being Unavailable*	2009-10	2010-11	2011-12
Competition for clinical space due to increase in number of nursing students in region	75.0%	50.0%	100%
Staff nurse overload or insufficient qualified staff	50.0%	50.0%	100%
Change in facility ownership/management		25.0%	0%
Closure, or partial closure, of clinical facility		25.0%	100%
Decrease in patient census	0%	25.0%	0%
No longer accepting ADN students	25.0%	25.0%	100%
Clinical facility seeking magnet status	25.0%	0%	0%
Displaced by another program	25.0%	0%	100%
Nurse residency programs	0%	0%	0%
Other	75.0%	50.0%	0%
Number of programs that reported	4	4	1

^{*}Data were collected for the first time in the 2009-2010 or 2010-2011 survey.

Note: Blank cells indicate that the applicable information was not requested in the given year.

Programs that lost access to clinical space were asked to report on the strategies used to cover the lost placements, sites, or shifts. The strategies used by the program that had been denied access were to replace the lost clinical space at the same site or at a different site currently in use by the nursing program, and to increase the use of clinical simulation.

Strategies to Address the Loss of Clinical Space, 2011-2012*

Strategy to Address Lost Clinical Space	2011-12
Replaced lost space at same clinical site	100%
Replaced lost space at different site currently used by nursing program	100%
Added/replaced lost space with new site	0%
Clinical simulation	100%
Reduced student admissions	0%
Other	0%
Number of programs that reported	1

^{*}Data were collected for the first time during the 2011-2012 survey.

Three nursing programs in Greater Sacramento reported an increase in out-of-hospital clinical placements in 2011-2012, with skilled nursing facilities and surgery or ambulatory care centers reported as the most frequently used alternative clinical placement sites overall.

Alternative Clinical Sites*	2010-11	2011-12
Skilled nursing/rehabilitation facility	2	3
Medical practice, clinic, physician office	1	1
Public health or community health agency	1	1
Outpatient mental health/substance abuse	0	1
Home health agency/home health service	0	0
School health service (K-12 or college)	0	1
Hospice	0	0
Surgery center/ambulatory care center	0	2
Renal dialysis unit	0	0
Urgent care, not hospital-based	0	0
Case management/disease management	0	0
Occupational health or employee health service	0	0
Correctional facility, prison or jail	0	0
Number of programs that reported	3	3

^{*}Data collected for the first time in 2010-2011

In 2011-2012, 71.4% (n=5) of Greater Sacramento schools reported that pre-licensure students in their programs had encountered restrictions to clinical practice imposed on them by clinical facilities. The most common types of restricted access students faced were to the clinical site itself, due to a visit from the Joint Commission or another accrediting agency, access to bar coding medication, and access to electronic medical records. Schools reported that it was uncommon to have students face restrictions to automated medical supply cabinets, alternative settings due to liability, or to having direct communication with a healthcare team.

Common Types of Restricted Access for RN Students	2009-10	2010-11	2011-12
Clinical site due to visit from accrediting agency (Joint Commission)	83.3%	100%	80.0%
Bar coding medication administration	66.7%	80.0%	60.0%
Student health and safety requirements		80.0%	40.0%
Electronic Medical Records	66.7%	60.0%	60.0%
Direct communication with health team	33.3%	40.0%	0%
Some patients due to staff workload		40.0%	40.0%
Automated medical supply cabinets	50.0%	20.0%	0%
Glucometers	50.0%	20.0%	20.0%
IV medication administration	16.7%	20.0%	20.0%
Alternative setting due to liability	33.3%	0%	0%
Number of schools that reported	6	5	5

Note: Blank cells indicated that the applicable information was not requested in the given year.

Faculty Census Data⁶

On October 15, 2012, there were 168 total nursing faculty in Greater Sacramento, 47.6% (n=80) of whom were full-time while 52.4% (n=88) were part-time. The need for faculty continues to outpace the number of active faculty. On October 15, 2012, there were 36 vacant faculty positions in the region, which represents a 17.6% faculty vacancy rate.

Faculty Census Data[†]

						Year				
	2003	2004	2005*	2006	2007*	2008	2009	2010	2011	2012
Total Faculty	115	125	132	125	163	156	175	150	161	168
Full-time	72	66	66	54	83	79	84	86	78	80
Part-time	43	59	28	71	80	77	91	64	83	88
Vacancy Rate**	0.0%	3.8%	0.0%	2.3%	4.1%	4.9%	2.2%	2.0%	3.6%	17.6%
Vacancies	0	5	0	3	7	8	4	3	6	36

[†]2012 data may be influenced by the allocation of satellite campus data from another region

In 2011-2012, three of the seven Greater Sacramento nursing schools (42.9%) reported that their faculty work overloaded schedules. 100% of these schools pay the faculty extra for the overloaded schedule.

	Academic Year			
Overloaded Schedules for Faculty*	2008-09	2009-10	2010-11	2011-12
Schools with overloaded faculty	5	5	3	3
Share of schools that pay faculty extra for the overload	80%	80%	100%	100%
Total number of schools	6	6	6	7

^{*}These data were collected for the first time in 2008-09.

^{*}The sum of full- and part-time faculty did not equal the total faculty reported in these years.

^{**}Vacancy rate = number of vacancies/(total faculty + number of vacancies)

⁶ Census data represent the number of faculty on October 15th of the given year.

⁷ Since faculty may work at more than one school, the number of faculty reported may be greater than the actual number of individuals who serve as faculty in nursing schools in the region.

Summary

The number of pre-license nursing programs in the Greater Sacramento region increased by one new ADN program in 2011-2012 academic year. However, no programs in the region reported that they partner with another school to offer a program leading to a higher nursing degree.

Greater Sacramento programs reported a total of 653 spaces available for new students in 2011-2012, which were filled with a total of 677 new enrollments. This represents the eighth consecutive year pre-licensure nursing programs in the region enrolled more students than were spaces available. Qualified applications to the region's programs in 2011-2012 totaled 4,741, 85.7% of which were not accepted for admission

In 2011-2012, pre-license nursing programs in the region reported 556 completions, more than double the number reported ten years ago. However, if the current retention rate of 82.8% remains consistent, and if new student enrollments decline from their current level, the annual number of graduates from Greater Sacramento nursing programs is likely to decline in future years. At the time of the survey, 26.7% of recent graduates from the region's pre-license programs were unable to find employment in nursing.

All schools in the Greater Sacramento region are now using clinical simulation. It is seen by schools as an important tool for providing clinical experiences that are otherwise not available to students and also to make up for clinical experiences. The importance of clinical simulation is underscored by data showing a broader range of clinical placements in non-hospital settings, and schools continue to report that their students face restrictions to specific types of clinical practice.

Expansion in RN education has required nursing programs to hire more faculty to teach the growing number of students. The number of nursing faculty in the region has increased in the past ten years to meet this demand, however, faculty hires have not kept pace with the growth in California pre-licensure nursing programs. In 2012, 36 faculty vacancies were reported, representing a faculty vacancy rate of 17.6%. A shortage of faculty remains and an obstacle to RN program expansion.

APPENDICES

APPENDIX A – Greater Sacramento Nursing Education Programs

ADN Programs (6)

American River College
Carrington College (formerly Western Career College – Sacramento)
*ITT Technical Institute
Sacramento City College
Sierra College
Yuba College

BSN Program (1)

CSU Sacramento

Satellite Campus (1)

Samuel Merritt University - BSN/ELM

APPENDIX B – BRN Education Issues Workgroup

BRN Education Issues Workgroup Members

Members	Organization

Loucine Huckabay, Chair California State University, Long Beach

Audrey Berman Samuel Merritt University
Liz Close Sonoma State University

Brenda Fong Community College Chancellor's Office

Patricia Girczyc College of the Redwoods Marilyn Herrmann Loma Linda University

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Ex-Officio Member

Louise Bailey California Board of Registered Nursing

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^{* -} New programs in 2011-2012